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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,330	04/02/2001	James Michael Nelson	56081USA8A.002	9412

32692 7590 06/30/2005

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EXAMINER

HANDY, DWAYNE K

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,330

Applicant(s)

NELSON ET AL.

Examiner

Dwayne K. Handy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, applicant has broadly claimed a method of making a combinatorial library. The method includes the step of "introducing **one** or more components into the plug flow reactor. While the Examiner understands how more than one compound may react at various conditions to form the library, but it is unclear to the Examiner how the **library** of compounds may be formed if only one compound is used. If only one compound is used, then varying certain properties such as temperature may alter the rate of reaction or the amount of product formed – but not the identity of the product itself.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Bergh et al. (6,749,814). Bergh teaches a chemical processing system for combinatorial chemistry (col. 3, lines 15-20). PFR and CSTR reactor modeling is disclosed in column 12, lines 35-65; column 37, lines 3-17. The passage from column 12 also includes a recitation of providing passive mixers. Bergh teaches varying a wide variety of variables including residence time, temperature, starting materials, pressure, mixing and reaction yield (col. 7, lines 1-14; col. 13, lines 1-17; column 22, lines 20-60; col. 43, line 40 – col. 45, line 27). Bergh recites use of the device in polymerization in column 18, lines 54-67.

Inventorship

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergh et al. (6,749,814) in view of Priddy et al. (4,572,819). Bergh teaches every element of the method of claims 5 and 7 except for the use of an extruder in the reaction. Priddy et al. teach an apparatus for anionic polymerization wherein the molecular weight of the polymer is closely controlled. In Example 2, Priddy discloses the use of an extruder in making their polymer. The extruder is used to remove the polymer from the reactor in strand form so that the polymer may be examined or used. It would have been obvious to one of ordinary skill in the art to combine the use of an extruder with the method of Bergh. Extruders are commonly used to remove solid

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materials during the formation of polymers from liquid precursors. It would be advantageous to use an extruder for removal of products in a continuous system for examining reaction products.

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergh et al. (6,749,814) in view of Citron et al. (6,586,541). Bergh teaches every element of claims 13 and 14 except for a step-growth or coordination polymerization and the use of a metallocene catalyst. Citron et al. teach a process for the production of polyolefin copolymers in a plug flow reactor (col. 5, lines 21-48). As stated by Citron in column 10, the preferred catalyst for the process of Citron uses a metallocene catalyst. It would have been obvious to one of ordinary skill in the art to combine the use of the metallocene catalyst from Citron with the teachings of Bergh. One would add the metallocene catalyst to perform copolymerizations as described by Citron.

Response to Arguments

8. Applicant's arguments/submission with respect to the claims rejected under Bergh et al. (US 2002/0170976) have been considered but are moot in view of the new ground(s) of rejection. Applicant has submitted information in a declaration that is sufficient to overcome the previous rejection under Bergh (US 2002/0170976). This rejection is removed. Claims 1-4, 6 and 8-12 are now rejected under a new Bergh reference having an earlier effective filing date.

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Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references of Bergh et al. (6,737,026; 6,890,493; 6,902,924) also contain the teachings of the Bergh reference used in the rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K. Handy whose telephone number is (571)-272-1259. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKH
June 20, 2005


Jill Warden
Supervisory Patent Examiner
Technology Center 1700